

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Original) A method of connecting a mobile host to an access network with an intelligent device connected to the mobile host, comprising the steps of:
 - (a) receiving a host configuration request message from the mobile host using a host configuration protocol;
 - (b) sending an access request to the access network;
 - (c) receiving a response to the access request from the access network with an IP address for the mobile host;
 - (d) selecting an IP address in the same subnet as the IP address for the mobile host; and
 - (e) sending a reply message to the mobile host with the selected IP address as the source IP address and the IP address for the mobile host as the destination IP address.

2. (Currently Amended) A method of connecting a mobile host to access an access network with an intelligent device connected to the mobile host, comprising the steps of:
 - (a) receiving a DHCP_DISCOVER message from the mobile host;
 - (b) sending an access request to the access network;
 - (c) receiving a response to the access request from the access network with an IP address for the mobile host;
 - (d) selecting an IP address in the same subnet as the IP address for the mobile host;
 - ~~(d)~~ (e) sending a DHCP_OFFER message to the mobile host;
 - ~~(e)~~ (f) receiving a DHCP_REQUEST message from the mobile host; and
 - ~~(f)~~ (g) sending a DHCP_REQUEST message to the mobile host.

3. (Original) The method of claim 1, wherein the DHCP_DISCOVER message is packaged into an Ethernet frame with a first MAC address as a source MAC address and an Ethernet broadcast address.

4. (Original) The method of claim 2, wherein the DHCP_OFFER message is packaged into an Ethernet frame with a second MAC address as a source MAC address and said first MAC address as a destination MAC address.

5. (Currently Amended) A method of disconnecting a mobile host from an access network with an intelligent device connected to the mobile host, comprising the steps of:

- (a) receiving a DHCP_RELEASE message from the mobile host;
- (b) sending a disconnect request message to the access network; and
- (c) receiving a disconnect response message from the access network.

6. (Original) The method of claim 4, wherein said DHCP_RELEASE message contains a destination IP address selected by the logical device, said destination IP address being on the same subnet as the IP address allocated to the mobile host.

7. (Currently Amended) A method of connecting a mobile host to a service provider's network, through a CPDP network or a WLAN, with an intelligent device connected to the mobile host, comprising the steps of:

- (a) receiving a DHCP_DISCOVER message from the mobile host;
- (b) sending an access request to the WLAN;
- (c) receiving a response from the WLAN with an IP address for the mobile host on the WLAN;
- (d) sending an access request to the service provider's network;
- (e) receiving a response from the service provider's network with an IP address for the mobile host on the service provider's network;
- ~~(d)~~ (f) selecting an IP address in the same subnet as the IP address for the mobile host;
- ~~(e)~~ (g) sending a DHCP_OFFER message to the mobile host;
- ~~(f)~~ (h) receiving a DHCP_REQUEST message from the mobile host; and
- ~~(g)~~ (i) sending a DHCP_ACKNOWLEDGE message to the mobile host.

8. (Currently Amended) A method of routing IP packets from a mobile host to a target host on a WLAN with an intelligent device connected to the mobile host, comprising the steps of;

- (a) receiving an ARP request message with a destination IP address of the target host;
- (b) sending a fake ARP reply message with said destination IP address of the target host corresponding to a MAC address of the intelligent device;
- (c) receiving an IP packet encapsulated in an Ethernet frame from the mobile host; and
- (d) sending an IP-in-IP packet encapsulated in a WLAN frame to an access point on the WLAN.

9. (Original) The method of claim 8, wherein said IP-in-IP packet encapsulated in said WLAN frame of step (c) is of the form [MAC_{NIC}, MAC_{AP} [IP_{MH@AN}, IP_{RAS@ON} [IP_{MH@ON}, IP_{DST@ON}, IP PAYLOAD]]], wherein MAC_{NIC} is the MAC of the WLAN interface, MAC_{AP} is the MAC of the access point, IP_{MH@AN} is the IP address of the mobile host on the access network, IP_{RAS@ON} is the IP address of the RAS on the WLAN, IP_{MH@ON} is the IP address of the mobile host on the WLAN, and IP_{DST@ON} is the IP address of the target host on the WLAN.